REMARKS

Claims 1-22 are pending. By this Amendment, claims 1-6, 8, 10-17, 19 and 21 are amended. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Claim 11 was objected to. Claim 11 has been amended to obviate the objection. Reconsideration and withdrawal of the objection are respectfully requested.

Claims 1, 8-12 and 19-22 were rejected under 35 U.S.C. §102(b) over Oshida et al. (Japanese Patent Application Publication 2002-33274). The rejection is respectfully traversed.

Claim 1 recites a projection system comprising, *inter alia*, a processing unit configured to communicate with a sensor. The sensor is configured to measure a spatial orientation of a projection device. The processing unit is further configured to communicate with a positioning device that is configured to adjust the position of the projection device and at least one of a first object and a second object based on the measured spatial orientation of the projection device.

Oshida et al. do not disclose or suggest a positioning device configured to adjust the position of the projection optical system for and at least one of the wafer stage 6 and the reticle stage 3. The jogging control means 10 controls only the position of the wafer stage 6 and/or the reticle stage 3. See, for example, paragraphs [0015] and [0017], where it is disclosed that under the condition by which residual vibration is controlled, either the wafer stage 6 or the reticle stage 3 or both are made to move slightly by the jogging control means 10.

As Oshida et al. do not disclose or suggest all of the features of claim 1, Oshida et al. cannot anticipate or render obvious the claim.

Claims 8 and 9 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 1 and for the additional features recited therein.

Claims 10 recites a method for projecting a beam of radiation coming from a first object, and received by a projection device, to a second object. The method comprises, *inter alia*, adjusting a position of the projection device and at least one of the first object and the second object to minimize a projection error.

As discussed above, Oshida et al. do not disclose or suggest adjusting a position of the projection optical system 4. Accordingly, Oshida et al. cannot anticipate or render obvious claim 10.

Claim 11 recites additional features of the invention and is allowable for the same reason discussed above with respect to claim 10 and for the additional features recited therein.

Claim 12 recites a lithographic apparatus comprising, *inter alia*, a processing unit configured to communicate with a sensor and a positioning device. The positioning is configured to adjust the position of a projection device and at least one of a first object and a second object based on a measured spatial orientation of the projection device.

Oshida et al. merely disclose adjusting the position of the wafer stage 6 and/or reticle stage 3, but do not disclose or suggest adjusting the position of the projection optical system 4. Therefore, Oshida et al. cannot anticipate or render obvious claim 12.

Claims 19 and 20 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 12 and for the additional features recited therein.

Claim 21 recites a device manufacturing method comprising, *inter alia*, adjusting a position of a projection device and at least one of a patterning device and a substrate to minimize a projection error.

Oshida et al. do not disclose or suggest adjusting a position of the projection optical system 4. Oshida et al. thus cannot anticipate or render obvious claim 21.

Claims 22 recites additional features of the invention and is allowable for the same reasons discussed above with respect to claim 21 and for the additional features recited therein.

Reconsideration and withdrawal of the rejection of claims 1, 8-12 and 19-22 over Oshida et al. are respectfully requested.

Claims 2-7 and 13-18 were rejected under 35 U.S.C. §103(a) over Oshida et al. in view of Nishi (U.S. Patent Application Publication 2003/0151728 A1). The rejection is respectfully traversed.

Claims 2-7 and 13-18 recite additional features of the invention are allowable for the same reasons discussed above with respect to claims 1 and 12 and for the additional features recited therein. In addition, it is respectfully submitted that Nishi fails to cure the deficiencies of Oshida et al. with respect to claims 1 and 12 and that even assuming it would have been obvious to combine the references, which Applicants do concede, such a

combination would not disclose or suggest all of the limitations of claim 12 and would not present a *prima facie* case of obviousness.

Reconsideration and withdrawal of the rejection of claims 13-18 over Oshida et al. in view of Nishi are respectfully requested.

Claims 1, 8-12 and 19-22 were rejected under 35 U.S.C. §102(e) over Saiki et al. (U.S. Patent 6,744,511). The rejection is respectfully traversed.

Saiki et al. also do not disclose or suggest a positioning device configured to adjust the position of a projection device and at least one of a first object and a second object based on the measured spatial orientation of the projection device, as recited in claim 1. As disclosed in column 14, lines 32-37, the projection optical system 204 between the mask 202 and the substrate 205 is fixed to the base 210 by means of the B column 208. As disclosed further in column 15, lines 21-29, the control unit 217 drive-controls the carriage 207 by the drive amplifier 221. The main control device 230 and the control unit 217 constitute a servo loop, which provides following control of the carriage 207 and thus of the substrate stage 206 based on the variable speed instruction output from the variable speed control unit 218, the position information of the projection optical system 204 of A column 209 referenced, and the position information of the substrate stage 206. See also, for example, claim 1 of Saiki et al. which discloses a first drive mechanism and a second drive mechanism for driving the movable stage in at least a first direction, wherein, at least part of the first drive mechanism is coupled to the second portion of the movable stage.

Claims 8 and 9 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 1 and for the additional features recited therein.

As discussed above, claim 10 recites adjusting a position of the projection device and at least one of the first object and the second object to minimize a projection error.

Saiki et al. do not disclose or suggest adjusting the position of the projection optical system 204 because it is fixed to the base 210 by the B column 208. Accordingly, Saiki et al. cannot anticipate or render obvious claim 10.

Claim 11 recites additional features of the invention and is allowable for the same reasons discussed above with respect to claim 10 and for the additional features recited therein.

Saiki et al. do not disclose or suggest a lithographic apparatus having a positioning device configured to adjust the position of a projection device and at least one of a first object

and a second object, as recited in claim 12. Saiki et al. merely disclose adjusting the position of the substrate stage 206.

Claims 19 and 20 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claim 12 and for the additional features recited therein.

Claim 21 recites adjusting a position of a projection device and at least one of a patterning device and a substrate to minimize a projection error.

Saiki et al. only disclose adjusting a position of a substrate stage 206, and do not disclose or suggest adjusting the position of the fixed projection optical system 204. Therefore, Saiki et al. cannot anticipate or render obvious claim 21.

Claim 22 recites additional features of the invention and is allowable for the same reasons discussed above with respect claim 21 and for the additional features recited therein.

Reconsideration and withdrawal of the rejection of claims 1, 8-12 and 19-22 over Saiki et al. are respectfully requested.

Claims 2-7 and 13-18 were rejected under 35 U.S.C. §103(a) over Saiki et al. in view of Nishi. The rejection is respectfully traversed.

Claims 2-7 and 13-18 recite additional features of the invention and are allowable for the same reasons discussed above with respect to claims 1 and 12, respectively, and for the additional features recited therein. In addition, it is respectfully submitted that Nishi fails to cure to the deficiencies of Saiki et al. with respect to claims 1 and 12 and even assuming it would have been obvious to combine the references, which Applicants do not concede, such a combination would not disclose or suggest all of the limitations of claims 1 and 12 and would not present a prima *facie case* of obviousness.

Reconsideration and withdrawal of the rejection of claims 2-7 and 13-18 over Saiki et al in view of Nishi are respectfully requested.

In view of the above amendments and remarks, Applicants respectfully submit that all the claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

JOHN P. DARLING
Reg. No. 44482
Tel. No. (703) 770-7745
Fax No. (703) 770-7901

Date: January 17, 2006
P.O. Box 10500
McLean, VA 22102
Tel. No. (703) 770-7900